

L58 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1980:166541 CAPLUS
 DN 92:166541
 ED Entered STN: 12 May 1984
 TI Tantalum oxide film
 IN Nishimura, Nobuo
 PA Sharp Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC C01G035-00
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55010455	A2	19800124	JP 1978-83360	19780707 <--
	JP 58030252	B4	19830628		
PRAI	JP 1978-83360	A	19780707		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 55010455	IC	C01G035-00
AB	A mixture of Ta alkoxide 1, a carboxylic acid ≤ 1 , and a solvent ≥ 1 volume parts is applied on a substrate and heated to obtain an antireflection coating. Thus, a mixture of Ta(OEt) ₅ 1, AcOH 1, and EtOH 8 volume parts was applied on a Si substrate at 5000 rpm for 10 s, and heated at 200, 300, 400, 500, or 800° to obtain coatings having n 1.85, 2.00, 2.00, 2.06, and 2.13, resp. When a 2 x 2 cm Si solar cell was coated with a 70-nm thick coating having 1.95, the short-circuit current was increased by 30%.		
ST	tantalum oxide antireflection coating; silicon solar cell antireflection coating		
IT	Photoelectric devices		
	(solar, silicon, manufacture of tantalum oxide antireflection coatings for)		
IT	1314-61-0P		
	RL: PREP (Preparation)		
	(antireflection coating for solar cells, manufacture of)		
IT	7440-21-3, uses and miscellaneous		
	RL: USES (Uses)		
	(photoelec. solar cells, manufacture of tantalum oxide antireflection coatings for)		
RN	1314-61-0P		
RN	7440-21-3		

L58 ANSWER 2 OF 3 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 1980-17245C [10] WPIX
 TI Tantalum oxide film production - by heating coating prepared from tantalum alkoxide, carboxylic acid and solvent; used e.g. for photoelectric transducer.
 DC L03 U12
 PA (SHAF) SHARP KK
 CYC 1
 PI JP 55010455 A 19800124 (198010)*
 JP 58030252 B 19830628 (198329)
 PRAI JP 1978-83360 19780707
 IC C01G035-00; H01L031-02
 AB JP 55010455 A UPAB: 19930902
 Production of tantalum oxide film comprises coating a compsn. of 1 volume tantalum alkoxide, ≤ 1 volume of carboxylic acid and ≥ 1 volume of solvent onto substrate, and then heating it. The simple method is suitable for

mass production processes. This tantalum oxide film may be used for photoelectric transducer device, dielectrics and anti-reflection coating of optical device and insulation material.

FS CPI EPI

FA AB

MC CPI: L02-G07; L02-G10; L03-D01D

L58 ANSWER 3 OF 3 JAPIO (C) 2005 JPO on STN

AN 1980-010455 JAPIO

TI PRODUCTION OF TANTALUM OXIDE FILM

IN NISHIMURA NOBUO

PA SHARP CORP

PI JP 55010455 A 19800124 Showa

AI JP 1978-83360 (JP53083360 Showa) 19780707

PRAI JP 1978-83360 19780707

SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1980

IC ICM C01G035-00

ICA H01L031-02

AB PURPOSE: To produce a tantalum oxide thin film with a desired refractive index in a short time by coating a substrate with a coating compsn. obtd. by mixing tantalum alkoxide and carboxylic acid into a solvent and by heating the coated substrate.

CONSTITUTION: A substrate for a semiconductor material, an optical instrument or the like is coated with a coating compsn. obtd. by mixing 1 volume of tantalum alkoxide such as tantalum ethylate and below 1 volume of carboxylic acid such as glacial acetic acid into above 1 volume of a solvent such as ethyl alcohol. The coated substrate is then heated to evaporate the solvent.

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